Name

Apply the power-of-a-product rule

1

Find the simplified form of this number raised to its exponent

$$9 \times 9$$

A 9^3	B 9^2	C 12^5
D 2^9	E 13^6	F 13^3

2

Use the power of a product rule to separate this into a product of powers.

$$(4 \cdot 5)^4$$

A $4^8 \cdot 5^8$	B $4^4 \cdot 5$
C $4 \cdot 5^4$	D $4^4 \cdot 5^4$
E $4^4 + 5^4$	

3

Use the power of a product rule to separate this into a product of powers.

$$(xm)^2$$

A $x^4 \cdot m^4$	B $x \cdot m^2$
C $x^2 + m^2$	D $x^2 \cdot m^2$
E $x^2 \cdot m$	

4

Use the power of a product rule to write this as a single power of a product.

$$m^4 \cdot y^4$$

A $(my)^4$	B $(m+y)^4$
C $(my)^5$	D $(my)^8$

5

Use the power of a product rule to separate this into a product of powers.

$$(14)^3$$

A $2^3 \cdot 7^3$	B $2^3 \cdot 7$
C $2 \cdot 7^3$	D $2^3 + 7^3$
E $2^6 \cdot 7^6$	

6

Use the power of a product rule to write this as a single power of a product.

$$3^3 \cdot 7^3$$

A $(21)^4$	B $(21)^3$
C $(10)^3$	D $(21)^6$

7

Use the power of a product rule to separate this into a product of powers.

$$\left(\frac{2}{7} \cdot \frac{3}{6}\right)^4$$

A $\left(\frac{2}{7}\right)^4 + \left(\frac{3}{6}\right)^4$	B $\left(\frac{2}{7}\right)^8 \cdot \left(\frac{3}{6}\right)^8$
C $\left(\frac{2}{7}\right)^4 \cdot \left(\frac{3}{6}\right)^4$	D $\frac{2}{7} \cdot \left(\frac{3}{6}\right)^4$
E $\left(\frac{2}{7}\right)^4 \cdot \frac{3}{6}$	

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8
Use the power of a product rule to write this as a single power of a product.

$$\left(\frac{3}{6}\right)^3 \cdot \left(\frac{4}{5}\right)^3$$

A $\left(\frac{3}{6}+\frac{4}{5}\right)^3$	B $\left(\frac{3}{6}\cdot\frac{4}{5}\right)^6$
C $\left(\frac{3}{6}\cdot\frac{4}{5}\right)^4$	D $\left(\frac{3}{6}\cdot\frac{4}{5}\right)^3$

9
Use the power of a product rule to separate this into a product of powers.

$$(2\cdot 5)^2$$

A $2^2\cdot 5^2$	B $2^2\cdot 5$
C 2^2+5^2	D $2\cdot 5^2$
E $2^4\cdot 5^4$	

10
Use the power of a product rule to separate this into a product of powers.

$$(rn)^2$$

A $r^2\cdot n^2$	B $r^4\cdot n^4$
C r^2+n^2	D $r^2\cdot n$
E $r\cdot n^2$	

11
Use the power of a product rule to write this as a single power of a product.

$$t^4\cdot q^4$$

A $(tq)^8$	B $(t+q)^4$
C $(tq)^5$	D $(tq)^4$

12
Use the power of a product rule to separate this into a product of powers.

$$(10)^3$$

A $2^3\cdot 5^3$	B $2^6\cdot 5^6$
C $2^3\cdot 5$	D 2^3+5^3
E $2\cdot 5^3$	